SPACE AVAILABLE IN
EXPLORATION AND SPACE OPERATIONS 40
February 28 – March 4, 2005 at Goddard Space Flight Center

Please consult your Training Point of Contact for the proper procedure to follow in applying to attend this program.

If you have been through this program already and know someone else who might be interested please pass this information along!

TARGET AUDIENCE**:** Engineers, System Engineers, Project Engineers, Researchers, Project Managers and Administrators responsible for the development, operation and management of exploration systems and space operations.

PREREQUISITES: Three years of experience or Introduction to Aerospace at NASA. It is beneficial, but not required, for the participant to have attended one of the following: the Earth Science Workshop, Space Science Workshop, Science Mission and System Design Workshop or Designing Space Missions and Systems.

FORMAT**:** 5-day workshop integrating lectures, videos, animations, models and simulations as well as group problem solving activities to provide an excellent learning environment. This is a revised version of the HEDS Workshop.

PROGRAM OVERVIEW**:** A systematic, end-to-end view of most aspects of human spaceflight for Moon, Mars and Earth-orbiting missions and systems. Applied Space System Engineering at its best. A process-oriented approach is emphasized for creating effective concepts and architectures to meet Exploration Systems and Space Operations objectives. Major aspects of designing for crewed exploration missions and systems are addressed, including humans in space; design and sizing of space habitats; the space element; and orbits and trajectories. Hazards and mitigation techniques of the operating environment are presented. The surface element, deployment and construction strategies, and the principles, options, sizing, and application of subsystems are discussed. An overview of cost-reduction techniques and mission operations, making everything play together in a cost-effective manner, address critical elements of design. Integrating examples are used to illustrate the practical application of the processes, tools and techniques presented. Typical examples are a short duration lunar base mission and a long-duration Mars mission.

TRAINING SITE INFORMATION:
This is a non-residential class held at Goddard Space Flight Center. For those participants from Centers other than GSFC, your Center will be responsible for travel, lodging and meals. NASA HQ will pay for tuition for all participants.

HOW TO REGISTER:
Please consult your Training Point of Contact for the proper procedure to follow in applying to attend this program. Registration deadline is **January 10, 2005**.

Center – Training Point of Contact:
ARC – Mike Forsman, 650-604-5649
DFRC – Louise Boyd, 661-276-5048
GRC – Nona Akos, 216-433-8520
GSFC – Diane Severn, 301-286-4121
HQ – Sheila Jackson, 301-286-2022
JPL – Mark Lopez, 818-393-6878 or Sandy Dennis, 818-354-3751
JSC – Cheryl Mintz, 281-483-3003
KSC – Mark Thompson, 321-867-2351
LaRC – Walt Mayes, 757-864-9487
MSFC – Travian Smith, 256-544-1095
SSC – Anita Douglas, 601-688-3697

IF YOU HAVE ANY QUESTIONS:
Please contact Gina Coluzzi (RGI, Inc.) at 703-820-4900, extension 110, or via e-mail at gcoluzzi@rgi-inc.com.